

NATIONAL BUREAU OF STANDARDS REPORT

3606

Appendix II
to
Instruction Book
for
Transmissometer Set
AN/GMQ-10



**U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS**

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Cryogenic Engineering. Cryogenic Equipment. Cryogenic Processes. Properties of Materials. Gas Liquefaction.

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Radio Propagation Engineering. Frequency Utilization Research. Tropospheric Propagation Research.

Radio Standards. High Frequency Standards. Microwave Standards.

NATIONAL BUREAU OF STANDARDS REPORT

NBS PROJECT

NBS REPORT

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Appendix II to Instruction Book for Transmissometer Set AN/GMQ-10

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**U. S. DEPARTMENT OF COMMERCE
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APPENDIX II

MAINTENANCE PARTS LIST

B-1. GENERAL.

B-1.1. PURPOSE OF MAINTENANCE PARTS LIST. The maintenance parts list which follows may be used in two ways: (a) in conjunction with parts identification photographs and drawings to identify a part by reference symbol, name, function, and/or manufacturer's catalog number; (b) in conjunction with Sections V and VII in trouble shooting.

B-1.2. SCOPE. This maintenance parts list contains a listing of all electrical and electronic parts and most mechanical and structural parts of Transmissometer Set AN/GMQ-10.

B-1.3. ARRANGEMENT OF MAINTENANCE PARTS LIST. The maintenance parts list has the following primary divisions: (1) Major Units; (2) Transmissometer Receiver R-547/GMQ-10 and Amplifier-Power Supply AM-809/GMQ-10; (3) Transmissometer Indicator ID-353/GMQ-10; and (4) Transmissometer Projector ML-461/GMQ-10 and Power Supply PP-908/GMQ-10. Parts of Cable Terminal Chambers J-556/GMQ-10 are included with those of the receiver and projector.

B-1.3.1. Each primary division, except that for major units, is subdivided by alphabetical order of the symbol number. Within the symbol groups, the parts are arranged numerically.

B-1.3.2. Each page of the maintenance parts list has five columns.

In order, from left to right, they are:

a. SYMBOL. This is the reference symbol number given on schematic diagrams or parts identification figures.

b. NAME OF PART AND DESCRIPTION. This column contains a brief description which is sufficient for part identification. When there are identical parts, the description is entered the first time only in each primary division. In lieu of a repeated description the statement "Same as ---" is entered.

c. FUNCTION OF PART. This column contains a brief statement of the function of each part.

d. TYPE NUMBER (JAN or Mfr). This column contains the JAN or MIL part number or manufacturer's part number for each part for which such a number is applicable. In the case of very common items (screws, nuts, etc.) sufficient description has been included in the description column to procure a suitable replacement item without going back to the manufacturer of the Set.

e. OTHER IDENTICAL PARTS. The Symbol numbers of other identical parts are entered in this column opposite the symbol number the first time the part is entered in the list.

B-2. REQUISITION OF SPARE PARTS.

B-2.1. AIR FORCE.

B-2.1.1. Since this parts list is intended to be only a parts identification list, use the appropriate T.O. No. 16-55, "Spare Parts List" as indicated in Part I of T.O. No. 00-1-16, "Numerical Index of Technical Publications -- Electronic Equipment Publications,"

for information regarding requisitioning spare parts.

B-2.2. OTHER AGENCIES.

B-2.2.1. Requisitioning of spare parts should be done as prescribed by the responsible agency. For convenience, a column headed "Type Number (JAN or Mftr)" has been included.

B-3. MAJOR UNITS OF TRANSMISSOMETER SET AN/GMQ-10.

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|--|--|-----------------------------|-----------------------------|
| U101 | Unit, pulse amplifier. | Generates a pulse signal with a pulse rate proportional to the light incident on the receiver. | C-H FL3050 | |
| U102 | Unit, receiver amplifier: less cabinet. | Amplifies pulse signal before impressing it onto the transmission line. | C-H FL3061 | |
| U103 | Unit, cable terminal chamber. | Chamber for termination of field cabling. | C-H 46957 | U303 |
| U201 | Unit, indicator: less cabinet and recorder. | Converts pulse signal to a meter reading proportional to the pulse rate. | C-H FL2807 | |
| U301 | Unit, projector power supply: less cabinet and voltage-regulating transformer. | Supplies power for lamp E301. | C-H FL2863 | |
| U302 | Unit, projector. | Housing for lamp E301. | C-H FL2862 | |
| U303 | Same as U103. (Unit, cable terminal chamber.) | Chamber for termination of field cabling. | | |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GMQ-10 AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10.

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------------------------------|---|---|-----------------------------|-----------------------------|
| <u>STRUCTURAL PARTS</u> | | | | |
| A101 | Hood, lens: brass. | Reduces stray light; protects lens I101. | C-H FL3345 | |
| A102 | Barrel, lens: brass. | Joins lens diaphragm assembly and pulse-amplifier unit housing. | C-H FL3358 | |
| A103 | Yoke, mounting: U-shaped; brass. | Front mounting support for receiver telescope assembly. | C-H FL3307 | |
| A104 | Ring, mounting: front; cast brass. | Front mounting support for receiver telescope assembly with rotational freedom for alignment purposes. | C-H FL3208 | |
| A105 | Ring, mounting: rear; cast brass. | Rear mounting support for receiver telescope assembly; holds vertical and horizontal alignment adjustment screws. | C-H FL3206 | |
| A106 | Cover: rear; cast brass. | Cover for pulse-amplifier unit housing. | C-H FL3148 | |
| A107 | Cabinet: receiver amplifier; cast aluminum. | Cabinet for receiver amplifier unit. | C-H FL3402 | |
| A108 | Bracket, mounting: for pivot bar; L-shaped. | Mounting for receiver amplifier unit pivot bar. (2 required) | C-H FL3451 | |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|--|--|-----------------------------|-----------------------------|
| A109 | Bar, pivot: round steel rod. | Provides pivot support for receiver amplifier unit extension arms. | C-H FL3409 | |
| A110 | Arm, extension: steel. | Supports receiver amplifier unit when extended. (2 required) | C-H FL3412 | |
| A111 | Bracket, mounting: for receiver amplifier chassis; steel. | Mounts receiver amplifier chassis to extension arms. (2 required) | C-H FL3411 | |
| A112 | Bracket, shipping: for receiver amplifier chassis; steel. | Provides support for receiver amplifier unit in shipment. (4 required) | C-H FL3410 | |
| A113 | Mounting subassembly: front; cast aluminum. | Front mounting base for cabinet A107. | C-H FL3399 | A309 |
| A114 | Mounting subassembly: rear; cast aluminum. | Rear mounting base for cabinet A107. | C-H FL3398 | A310 |
| A115 | Plate, mounting: brass. | Mounting plate for thermostat in pulse amplifier. | C-H FL4226 | |
| A116 | Terminal box: with cover; gray cast iron. | Waterproof housing for terminal blocks E109 and E110 and circuit breaker K101. | C-H YWS886036 | A311 |
| A117 | Hub plate, conduit: blank; gray cast iron. | Hub plate for A116. | C-H YYP800 | A312 |
| A118 | Hub plate, conduit: one 2 1/2" threaded conduit hub; gray cast iron. | Hub plate for A116. | C-H YYP87 | A313 |
| A119 | Hub plate, conduit: one 1" threaded conduit hub; gray cast iron. | Hub plate for A116. | C-H YYP83 | A314 |
| A120 | Plate, mounting: sheet steel. | Mounting plate in A116 for terminal blocks and circuit breaker. | C-H CPYK1 | A315 |

CAPACITORS

| | | | | |
|------|---|--|--------------------|------------------------------------|
| C101 | Capacitor, fixed: silvered mica dielectric; 20 mmf \pm 5%; 500 vdcw. (Value nominal; precise value determined at factory for individual pulse-amplifier units.) | Charging capacitor for V102; determines the sensitivity of pulse-amplifier unit. | Sprague Type MS | |
| C102 | Capacitor, fixed: mica dielectric; 10,000 mmf \pm 10%; 300 vdcw. | Bypass for R102. | CM35B103K | C209, C214 |
| C103 | Capacitor, fixed: mica dielectric; 470 mmf \pm 10%; 500 vdcw. | Blocking capacitor for J105. | CM20B471K | C108, C109, C110, C201, C210 |
| C104 | Capacitor, fixed: paper dielectric; 50,000 mmf \pm 10%; 600 vdcw. | Cathode bypass capacitor for V109. | CP53B1EF503K | |
| C105 | Capacitor, fixed: paper dielectric; 4 mf \pm 10%; 600 vdcw. | Filter capacitor in B+ supply. | CP70B1EF405K | C105A, C203, C211, C212 |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|--|--|-----------------------------|-----------------------------|
| C105A | Same as C105. | Filter capacitor in B+ supply. | | |
| C106 | Capacitor, fixed: paper dielectric; 1 mf \pm 10%; 400 vdcw. | Stabilizing capacitor for regulated B+ voltage. | CP53B1EE105K | |
| C107 | Capacitor, fixed: paper dielectric, metallized; 20 mf \pm 20%; 100 vdcw; 150 vdct. | With R111, forms an RC circuit to smooth the current through M101. | Gudeman XMF-17164 | |
| C108 | Same as C103. | Charging capacitor for V107 during forward half-cycle and bypass capacitor for reverse half-cycle. | | |
| C109 | Same as C103. | Couples signal from calibrator to V108. | | |
| C110 | Same as C103. | Couples signal from V109 to V108. | | |
| C111 | Capacitor, fixed: paper dielectric; 100,000 mmf \pm 10%; 600 vdcw. | Discharge capacitor for V108 - determines charge per pulse through V108. | CP53B1EF104K | C204 |
| C112 | Capacitor, fixed: paper dielectric; 2 mf \pm 20% - 10%; 600 vdcw. | Blocking capacitor, prevents current from rectifier CR301 flowing through T102 and actuating relay K301. | CP41B1EF205V | C213 |

ELECTRICAL EQUIPMENT

| | | | | |
|------|--|---|---------------------------------|---------------------|
| E101 | Insulator, feedthru: double ended conical shape; white porcelain, glazed. | Insulator for mounting C101. | Bud Rad I-436 | |
| E102 | Insulator, standoff: conical shape; white porcelain, glazed. | Insulator for mounting R101. | Bud Rad I-300 | E103, E105, E304 |
| E103 | Same as E102. | Insulator for mounting R107. | | |
| E104 | Board, terminal: general purpose; 2 brass nickel pl screw term with solder tabs. | 115 vac input terminals for use in bench tests. | Jones HB 2-141-3/4- W-B-2 | E202 |
| E105 | Same as E102. | Insulator for mounting R118. | | |
| E106 | Board, terminal: general purpose; 7 brass nickel pl screw term. | Terminal board for interconnecting cables. | Jones HB 7-141-B-2 | |
| E107 | Holder, fuse: extractor post type for single 3AG fuse. | Fuse holder for F101. | Buss HKP | E201, E302 |
| E108 | Board, terminal: general purpose; 11 pairs solder lug term. | Mounting board for small components. | C-H FL3013 | |
| E109 | Board, terminal: general purpose; 8 brass screw term. | Terminal board for field cabling. | GE 16EB1A2 | E305 |
| E110 | Board, terminal: general purpose; 4 brass screw term. | Terminal board for field power cable. | GE 16EB1A1 | E306 |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mftr) | Other Identical Parts |
|-----------------------|---|--|------------------------------|-----------------------------|
| <u>FUSES</u> | | | | |
| F101 | Fuse, cartridge: 1-1/4 amp, 250 v; one time; high time lag. | Fuses ac power line input to receiver amplifier. | Buss MDL-1-1/4 | F201 |
| <u>HARDWARE PARTS</u> | | | | |
| H101 | Tool, aligning: for use on trans- missometer receiver; brass; has round glass disk for focusing aid. | Used for preliminarily aligning the optical system of the receiver telescope. | C-H FL3385 | |
| H102 | Wrench, lens retaining ring. | Removes lens retaining ring 0101. | C-H FL3391 | |
| H103 | Inhibitor, bird: consists of U- shaped drop and mtg clip; brass. | Discourages birds from roosting in lens hood A101. | C-H FL3362 | |
| H104 | Screw, machine: slot drive; Fil H; brass, cad pl; #12-24 tnd; 1/2" lg. | Set screw to hold lens hood A101 in proper orientation. | | |
| H105 | Screw, set: slot drive; headless; steel; #8-32 thd; 1/2" lg; flat point. | Set screw to maintain position of lens retain- ing ring 0101. | | |
| H106 | Gasket: fiber; 4" OD, 3-3/4" ID, 1/32" thk. | Gasket for lens I101. (2 required) | C-H FL4164 | |
| H107 | Fitting, conduit: conduit Type LB; brass; 1/4". | Junction box for hood heater HR101. | C-H LB287 | |
| H108 | Cover, conduit fitting: brass. | Cover for H107. | C-H 2870 | |
| H109 | Gasket: rubber. | Gasket for H107. | C-H 4728 | |
| H110 | Fitting, conduit: flexible cable to conduit; brass; 1/4"; male thd. | Watertight entrance fitting. | C-H FL3445 | |
| H111 | Bushing: reducer; rubber. | Bushing for fitting H110. | C-H HL6537 | |
| H112 | Screw, machine: hex head; brass; 1/4"-20 thd; 3/4" lg; threaded portion 1/2" lg. | Screw for mounting dia- phragm assembly Q101 to barrel A102. (6 required) | | |
| H113 | Screw, machine: hex head; brass; 3/8"-16 thd; 1" lg; all threaded. | Holds yoke A103 and mount- ing ring A104 together. (2 required) | | |
| H114 | Screw, machine: hex head; brass; 3/8"-16 thd; 1-1/2" lg; threaded portion 1" lg. | Holds mounting ring A104 and barrel A102 together. (2 required) | | |
| H115 | Screw, machine: hex head; brass, cad pl; 3/8"-16 thd; 1" lg; threaded portion 3/4" lg. | Mounts receiver telescope assembly to stand. (4 required) | | |
| H116 | Screw, machine: hex head; brass; 1/4"-20 thd; 1/2" lg; all threaded. | Retains pulse amplifier unit in housing. (4 required) | | |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSIONETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|---|--|-----------------------------|-----------------------------|
| H117 | Screw, machine: hex head; brass; 1/4"-20 thd; 1-1/4" lg; threaded portion 7/8" lg. | Holds cover A106 to pulse- amplifier unit housing. (4 required) | | |
| H118 | Gasket: cover; silicone treated asbestos. | Gasket for cover A106. | C-H FL4304 | |
| H119 | Screw, set: Allen drive; headless; steel; 1/4"-20 thd; 1/2" lg; cup point. | Holds focusing ring 0103 in position. | | |
| H120 | Fitting, conduit: flexible cable to conduit; brass; 3/4"; male thd. | Watertight entrance fit- ting. | C-H CGB295 | H139 |
| H121 | Bushing: reducer; rubber. | Bushing for H120. | C-H BUSH05 | H140 |
| H122 | Washer, gland: steel, cad pl; 21/32" ID, 29/32" OD, 0.025" thk. | Permits tightening of H120 without distorting H121. | C-H GlandWash 94 | H141, H145 |
| H123 | Nut, hexagon: brass, cad pl; 3/8"-16 thd; 3/8" thk; 11/16" wd across flats. | Nut for H115. (4 required) | | |
| H124 | Screw, machine: hex head; brass; 3/8"-16 thd; 2-1/2" lg; all threaded. | Vertical or horizontal alignment screw. (4 required) | | |
| H125 | Gasket: door; silicone treated asbestos. | Gasket for door of cabi- net A107. | C-H FL3774 | H322 |
| H126 | Lock: key latch; ward mechan- ism. | Latch for cabinet A107. | Corbin Cabinet 0357SG | H318 |
| H127 | Key, lock: brass. | Key for H126. | | H319 |
| H128 | Bolt, double ended: stainless steel; 1/4"-20 thd; 2-3/4" lg; 3/8" threaded length each end; less nuts. | Hinge bolt for door of cabinet A107. (2 required) | C-H FL3452 | H328 |
| H129 | Nut, hexagon: steel, chromium pl; 1/4"-20 thd; 1/4" thk; 7/16" wd across flats. | Nut for H128. (4 required) | C-H KL5202 | H329 |
| H130 | Pin, dowel: brass; 3/8" diam x 1-3/8" lg. | Fastens extension arm A110 to pivot bar A109. (2 required) | C-H FL3417 | |
| H131 | Screw, machine: hex head; steel, cad pl; 3/8"-16 thd; 1-3/8" lg; threaded portion 1" lg. | Fastens receiver ampli- fier chassis brackets to extension arms. (2 required) | | |
| H132 | Nut, hexagon: steel, cad pl; 3/8"-16 thd; 3/8" thk; 11/16" wd across flats. | Nut for H131. (2 required) | C-H KL4726 | |
| H133 | Clamp, shipping: steel, cad pl; L-shaped. | Clamps receiver ampli- fier chassis during shipment. (4 required) | C-H FL3545 | |
| H134 | Screw, machine: slot drive; RH; brass, cad pl; #10-32 thd; 3/4" lg; all threaded. | Screw for H133. (4 required) | | |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSIONETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|---|---|-----------------------------|-----------------------------|
| H135 | Screw, machine: hex head; brass, nickel pl; 1/4"-20 thd; 5/8" lg; all threaded. | Fastens brackets A112 inside cabinet A107. (8 required) | | |
| H136 | Fitting, conduit: flexible cable to conduit; brass; 1", male thd. | Watertight entrance fitting. (2 required) | C-H CGB395 | H336 |
| H137 | Bushing: reducer; rubber. | Bushing for H136. (2 required) | C-H BUSH95 | H337 |
| H138 | Washer, gland: steel, cad pl; 1" ID, 1-3/8" OD, 0.025" thk. | Permits tightening of H136 without distorting H137. (2 required) | C-H GlandWash 95 | H338 |
| H139 | Same as H120. | Watertight entrance fitting. | | |
| H140. | Same as H121. | Bushing for H139. | | |
| H141 | Same as H122. | Permits tightening of A139 without distorting H140. | | |
| H142 | Fitting, conduit: reducer; steel, cad pl; 1-1/2" to 3/4". | Reduces diameter of hole in cabinet A107. | C-H RES2 | |
| H143 | Fitting, conduit: flexible cable to conduit; brass; 1/2", male thd. | Watertight entrance fitting. | C-H CGB193 | |
| H144 | Bushing: reducer; rubber. | Bushing for H143. | C-H BUSH93 | |
| H145 | Same as H122. | Permits tightening of H143 without distorting H144. | | |
| H146 | Strike, lock: steel; L-shaped. | Strike for latch H125. | C-H 4469N | H324 |
| H147 | Not used. | | | |
| H148 | Mounting, switch: steel, cad pl. | Mounting for S108. | C-H FL3427 | H201 |
| H149 | Cover: switch; steel, cad pl; L-shaped. | Protective cover for S108. | C-H FL3894 | H202 |
| H150 | Screw, machine: hex head; brass, nickel pl; 5/16"-18 thd; 3/4" lg; all threaded. | Screw for mounting brackets A108. (4 required) | | |
| H151 | Screw, machine: slot drive; FH; steel, nickel pl; 3/8"-16 thd; 5/8" lg; all threaded. | Screw for mounting sub-assembly A113 to cabinet A107. (3 required) | | |
| H152 | Nut, hexagon: brass, cad pl; 1/2"-13 thd; 1/2" thk; 5/8" wd across flats. | Nut for studs on mounting subassemblies A113 and A114. (4 required) | C-H KL2705 | H327 |
| H153 | Screw, machine: slot drive; hex head; steel, nickel pl; 3/8"-16 thd; 3/4" lg; all threaded. | Screw for mounting sub-assembly A114 to cabinet A107. (3 required) | | H323 |
| H154 | Clamp: capacitor mounting; footed. | Clamp for mounting C105. (2 required) | CP07FB4 | H155, H208, H209, H210 |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|-----------------------------|---|---|-----------------------------|-----------------------------|
| H155 | Same as H154. | Clamp for mounting C105A. (2 required) | | |
| H156 | Knob: bar; black bakelite; for 1/4" shaft. | Knob for S104. | Mallory 366-1 | H203, H332 |
| H157 | Washer, flat: steel; round; 7/16" ID, 3/4" OD, 1/16" thk. | Washer between extension arm A110 and mounting bracket A111. (2 required) | C-H 8238-N | |
| H158 | Screw, set: Allen drive; steel cad pl; #8-32 thd; 1/4" lg; cup point. | Locks iris diaphragm ad- justment shaft. | | H159 |
| H159 | Same as H158. | Locks lens retainer of pulse amplifier into position. | | |
| H160 | Washer, flat: fiber; round; 7/32" ID, 13/32" OD, 0.02" thk. | Makes screw H117 captive. (4 required) | | |
| H161 | Nut, check: hexagon; steel, cad pl; 1", pipe thd. | Locks H136 into place. (2 required) | | H339 |
| H162 | Nut, check: hexagon; steel, cad pl; 1/2", pipe thd. | Locks H143 into place. | | |
| H163 | Not used. | | | |
| H164 | Gasket: cover; rubber; 3/8" diam, 46" lg. | Gasket for cover of ter- minal box A116. | | H340 |
| H165 | Gasket: hub; cork. | Gasket between hub plates and terminal box A116. (3 required) | C-H Gask140 | H341 |
| <u>HEATERS</u> | | | | |
| HR101 | Heating element, electrical; cartridge type; 115 v, 50 w. | Heats lens hood and lens to prevent condensation of moisture on lens. | Wiegand C-201A | HR102 |
| HR102 | Same as HR101. | Heats pulse-amplifier unit. | | |
| <u>OPTICAL PARTS</u> | | | | |
| I101 | Lens, condensing: 4" diam, 32" focal length. | Objective lens for re- ceiver optical system. | C-H FL2907 | |
| I102 | Lens, condensing: 0.96" diam, 2.015" focal length. | Forms image of lens I101 on photosensitive surface of photoelectric cell V101. | C-H FL3063 | |
| <u>JACKS AND CONNECTORS</u> | | | | |
| J101 | Connector, male contact: 6 round male contacts. | Connector at pulse-ampli- fier unit for lines to receiver amplifier. | AN3102A-22-5P | J103, J202 |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GNQ-10
AND AMPLIFIER-POWER SUPPLY AN-809/GNQ-10 (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|--|---|-----------------------------|-----------------------------|
| J102 | Connector, female contact: 6 round female contacts. | Connector at receiver amplifier for lines to pulse-amplifier unit. | AN3102A-22-5S | |
| J103 | Same as J101. | Connector at receiver amplifier for lines from terminal board E106. | | |
| J104 | Connector, female contact: 2 curved contacts; 10 amp, 250 v; accepts standard 2-rectangular-contact male plug. | Convenience outlet for ac power. | Hubbell 9218 | J302 |
| J105 | Jack, telephone: for two cond 0.25" diam plug. | Input test jack. | JAN JJ103 | J106, J203, J204, J301 |
| J106 | Same as J105. | Output test jack. | | |

RELAYS AND CIRCUIT BREAKERS

| | | | | |
|------|---|----------------------------------|-------------------------|------|
| K101 | Circuit breaker: magnetic; 2 pole; 125 vac, 5 amp; molded black bakelite case; toggle action, manual reset. | Circuit breaker for input power. | Heineman 2263H6-5AC3 | K302 |
|------|---|----------------------------------|-------------------------|------|

INDUCTORS

| | | | | |
|------|--|----------------------------|-----------------------|------|
| L101 | Reactor: filter choke; 12 hy, 105 ma; 150 ohms dc resistance; 2500 v RMS test; hermetically sealed metal case. | Filter choke in B+ supply. | Chi Trans RH-12105 | L201 |
|------|--|----------------------------|-----------------------|------|

METERS

| | | | | |
|------|---|---|----------------------|------------|
| M101 | Meter, arbitrary scale: transmission; dc; range 0 to 100; one ma full scale deflection; accuracy 1% of full scale deflection. | Indicates transmission reading. | Weston Model #760 | M201, M301 |
| M102 | Meter, frequency indicator: ac, 56 to 64 cycles; vibrating reed movement; hermetically sealed; scale calibrated in "CALIBRATION SETTING" of 84 to 96. | Indicates calibration setting corresponding to ac-line frequency. | Biddle 4975-ES | M202 |

MECHANICAL PARTS

| | | | | |
|------|------------------------------|--|---------------|--|
| 0101 | Ring, lens retaining; brass. | Retains lens I101 in position. | C-H FL3250 | |
| 0102 | Insert, heater: brass. | Provides close thermal contact between heater H101 and diaphragm assembly Q101; connects conduit fitting H107 to Q101. | C-H FL3346 | |
| 0103 | Ring, focusing: brass. | Provides means of focusing projector image on field stop in pulse-amplifier unit. | C-H FL3196 | |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10 (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|-------------------|---|--|------------------------------|-----------------------------|
| 0104 | Bearing, sleeve: brass. | Bearing for pivot bar A109 and extension arm A110. (2 required) | C-H FL3408 | |
| <u>PLUGS</u> | | | | |
| P101 | Connector, female contact: 6 round female contacts; has fiber spacer disk in milled cap. | Plug for J101 (on cable W101). | AN3106A-22-SS (modified) | |
| P102 | Connector, male contact: 6 round male contacts; with cable clamp. | Plug for J102 (on cable W101). | AN3106A-22-5P w/AN3057-12 | |
| P103 | Connector, female contact: 6 round female contacts; with cable clamp. | Plug for J103 (on cable W103). | AN3106A-22-5S w/AN3057-12 | P202 |
| <u>DIAPHRAGMS</u> | | | | |
| Q101 | Diaphragm Assembly: iris type; brass; 1" min, 4" max aperture opening. | Changes quantity of light entering optical system from projector. | C-H FL3085 | |
| <u>RESISTORS</u> | | | | |
| R101 | Resistor, fixed: composition; 1 meg \pm 10%; 1/2 w. | Limits current through V101 in event of excessive illumination. | RC20BF105K | R102, R222, R225 |
| R102 | Same as R101. | Quenches discharge through V102. | | |
| R103 | Not used. | | | |
| R104 | Resistor, fixed: wirewound; 4000 ohm; 12 w. | Ballast resistor for V104 and V105. | RW32F402 or RW32G402 | |
| R105 | Resistor, fixed: composition; 10,000 ohm \pm 10%; 1 w. | Cathode bias resistor for V109. | RC30BF103K | R223 |
| R106 | Resistor, fixed: composition; 8,200 ohm \pm 10%; 1 w. | Damps oscillations which affect characteristics of V102. | RC30BF822K | |
| R107 | Resistor, fixed: composition; 47 ohm \pm 10%; 1/2 w. | With R108, shunts meter M101 (and M301); limits range of calibration ad- justment provided by R108. | RC20BF470K | |
| R108 | Resistor, variable: composition; 500 ohm \pm 10%; 2 w; slotted round metal shaft; linear taper. | With R107, shunts meter M101 (and M301); pro- vides calibration ad- justment by varying the current bypassing these meters. | AB JLJ5011 | |
| R109 | Resistor, fixed: composition; 47,000 ohm \pm 10%; 2 w. | Quenches discharge through V108. | RC41BF473K | R115 |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10 (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|-----------------|---|--|----------------------------------|------------------------------------|
| R110 | Resistor, fixed: composition; 47,000 ohm \pm 10%; 1/2 w. | Current limiting resistor for V107. | RC20BF473K | R228, R229 |
| R111 | Resistor, fixed: composition; 4700 ohm \pm 10%; 1/2 w. | With C107 (and R116 and R117) forms an RC circuit to smooth current through M101. | RC20BF472K | |
| R112 | Resistor, fixed: composition; 100,000 ohm \pm 10%; 1/2 w. | Grid resistor for V108. | RC20BF104K | R113, R204 |
| R113 | Not used. | | | |
| R114 | Resistor, fixed: composition; 100 ohm \pm 10%; 1/2 w. | Limits peak current through V108 during dis- charge. | RC20BF101K | |
| R115 | Same as R109. | With R116 and R117 (and R111) forms voltage divider to provide grid bias for V108. | | |
| R116 | Resistor, fixed: composition; 1000 ohm \pm 10%; 1/2 w. | With R115 and R117 (and R111) forms voltage divider to provide grid bias for V108; deter- mines minimum grid bias of V108. | RC20BF102K | |
| R117 | Resistor, variable: composition; 1000 ohm \pm 10%; 2 w; slotted round metal shaft; linear taper. | With R115 and R116 (and R111) forms voltage divider to provide grid bias for V108; grid bias adjustment potentiome- ter for V108. | AB JLJ1021 | R207 |
| R118 | Resistor, fixed: composition; 82 ohm \pm 10%; 1/2 w. | Substitutes for resistance of meter M301 (at pro- jector). | RC20BF820K | |
| <u>SWITCHES</u> | | | | |
| S101 | Switch, thermostatic: SPST; operating temp 90°F \pm 5°; 12 amp, 120 vac. | Regulates temperature in pulse-amplifier unit. | Spencer Thermo C4370-3-67 | |
| S102 | Switch, toggle: DPST. | Switches B+ supply to metering circuit (one pole only used). | ST22K | S105, S106, S107, S204, S301 |
| S103 | Switch, toggle: SPDT. | Switches meter M301 in or out of circuit. | ST12D | S201 |
| S104 | Switch, rotary: position #1-- 1C; position #2--1A; 3 amp, 110 vac; momentary contact in position #2. | Energizes calibrator and replaces pulse-amplifier signal on grid of V108 with calibrator signal. | Mossman DP 4402TN-NT- DPDT | S203 |
| S105 | Same as S102. | Opens B+ circuit to pulse- amplifier unit. | | |
| S106 | Same as S102. | Switches ac power to pulse-amplifier unit heater HR102. | | |
| S107 | Same as S102. | Main ac power switch. | | |
| S108 | Not used. | | | |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSION RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|---------------------|---|--|-----------------------------|-----------------------------|
| <u>TRANSFORMERS</u> | | | | |
| T101 | Transformer, AF: input type; primary 20,000 ohms impedance CT; drawnsteel upright, shielded case; laminated iron core; turns ratio of 1/2 primary to secondary 3:4. | Interstage coupling transformer between V102 and V109. | Chi Trans PHD-25 | |
| T102 | Transformer, pulse: used as output transf in receiver amplifier; hermetically sealed metal case; primary to secondary turns ratios of 40:1, 20:1, and 10:1 by secondary taps; 1250 v test. | Tube to transmission line output transformer from V109. | Chi Trans 16306 | |
| T103 | Transformer, power: filament and plate type; input 117 v, 50/60 cyc, single ph; sec#1, 740 vCT at 150 ma, sec #2, 5 vCT at 3 amp, sec #3, 6.3 vCT at 4 amp, sec #4, 6.3 vCT at 1 amp; hermetically sealed metal case. | Supplies ac power to filaments and B+ rectifier. | Chi Trans PHC-150 | T201 |
| <u>VACUUM TUBES</u> | | | | |
| V101 | Cell, photoelectric: type 919; vacuum phototube. | Produces a current proportional to amount of light incident on the photosensitive surface. | Type 919 | |
| V102 | Tube, electron: Wemco WL-759; cold cathode gas triode. | Pulse generator and pre-amplifier; pulse rate proportional to current through V101. | Wemco WL-759 | |
| V103 | Tube, electron: JAN-5Y3GT; duo-diode rectifier. | B+ rectifier. | JAN-5Y3GT | V208 |
| V104 | Tube, electron: JAN-OC3; diode voltage regulator. | With V105, regulates B+ for V101, V102, and V108. | JAN-OC3 | V203 |
| V105 | Tube, electron: JAN-OD3; diode voltage regulator. | With V104, regulates B+ for V101, V102, and V108. | JAN-OD3 | V209, V210 |
| V106 | Tube, electron: JAN-6H6; duo-diode rectifier. | Half-wave rectifier for calibrator. | JAN-6H6 | V206 |
| V107 | Lamp, glow: 115v, 1/4 w; bulb T-4 1/2 clear; double contact bayonet base. | Generates calibration pulses. | Type Ne-48 | V207 |
| V108 | Tube, electron: JAN-2050; thyatron. | Electronic switch; discharges C111 once for each pulse, producing a current whose average value is proportional to the pulse rate. | JAN-2050 | V201 |
| V109 | Tube, electron: JAN-6B4G; triode power amplifier. | Amplifies signal for transmission. | JAN-6B4G | |

B-4. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER RECEIVER R-547/GMQ-10
AND AMPLIFIER-POWER SUPPLY AM-809/GMQ-10 (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|---|---|--|-----------------------------|---|
| <u>WIRES AND INTERCONNECTING CABLES</u> | | | | |
| W101 | Cable assembly, special purpose: 6 #16 AWG stranded copper cond; 600 v working; type S0 neoprene jacket; 12 ft lg excluding ter- minations; AN3106A-22-5P con- nector w/AN3057-12 cable clamp on one end, AN3106A-22-5S connector w/milled cap at other end. | Cable between pulse-ampli- fier unit and receiver amplifier. | C-H FL3048 | |
| W102 | Cable assembly, power: type S0 cable; 2 #16 AWG stranded copper cond; 600 v working; 16 1/2 ft lg excluding terminations; stripped 1/2" on one end and solder lugs on other. | Carries ac power to hood heater HR101. | C-H FL4123 | |
| W103 | Cable assembly, special purpose: 6 #16 AWG stranded copper cond; 600 v working; type S0 neoprene jacket; 3 ft lg excluding ter- minations; AN3106A-22-5S con- nector w/AN3057-12 cable clamp on one end, other end terminated with solder lugs. | Cable between receiver amplifier and terminal block E106. | C-H FL2955 | |
| W104 | Not used. | | | |
| <u>SOCKETS</u> | | | | |
| X101 | Socket, tube: 4 contact, 2 large and 2 medium; round molded steatite body; silver pl phosphor bronze contacts. | Socket for V101. | Amphenol 49-RSS4 | X102 |
| X102 | Same as X101. | Socket for V102. | | |
| X103 | Socket, tube: octal. | Socket for V103. | TSB8T101 | X104, X105, X106, X108, X109, X201, X202, X203, X204, X205, X206, X208, X209, X210, X301 |
| X104 | Same as X103. | Socket for V104. | | |
| X105 | Same as X103. | Socket for V105. | | |
| X106 | Same as X103. | Socket for V106. | | |
| X107 | Socket, tube: neon lamp; double contact candelabra bayonet; brass body; 105- 125 v, 1/4 w. | Socket for V107. | Dialco 65-10 | X207 |
| X108 | Same as X103. | Socket for V108. | | |
| X109 | Same as X103. | Socket for V109. | | |

B-5. IDENTIFICATION OF PARTS FOR TRANSMISSION METER INDICATOR ID-353/GMQ-10.

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|-------------------------|--|---|-----------------------------|-----------------------------|
| <u>STRUCTURAL PARTS</u> | | | | |
| A201 | Cabinet: steel, painted gray; indicator recorder. | Cabinet for indicator unit and recording meter M203. | C-H FL2944 | |
| A202 | Panel: mounting for recording meter; steel; 17 1/2" high x 19" wd x 1/8" thk. | Mounting panel for recording meter M203. | C-H FL4305 | |
| A203 | Panel: blank; steel; 7" high x 19" wd x 1/8" thk. | Blank panel covering voltage-regulating transformer T202. | C-H FL3646 | |
| A204 | Bracket, mounting: for transformer; steel; 19 3/4" lg x 1 1/4" wd x 5/16" thk. | Mounting bracket for transformer T202. (2 required) | C-H FL3647 | |
| <u>CAPACITORS</u> | | | | |
| C201 | Same as C103. (Capacitor, fixed: mica dielectric; 470 mmf \pm 10%; 500 vdcw.) | Coupling between V205 and V201. | | |
| C202 | Capacitor, fixed: silvered mica dielectric; 2700 mmf \pm 5%; 500 vdcw. | Discharge capacitor for V201; with R217 determines charge per pulse through V201. | Sprague Type MS | |
| C203 | Same as C105. (Capacitor, fixed: paper dielectric; 4 mf \pm 10%; 600 vdcw.) | Smooths current flow through R206 (also R205 and R205A). | | |
| C204 | Same as C111. (Capacitor, fixed: paper dielectric; 100,000 mmf \pm 10%; 600 vdcw.) | With R211, forms an RC circuit which smooths the voltage applied to grid of V202. | | |
| C205 | Capacitor, fixed: mica dielectric; 1000 mmf \pm 10%; 500 vdcw. | Couples feed-back signal developed across R204 to control grid of V204. | CM30B102K | C301 |
| C206 | Capacitor, fixed: mica dielectric; 100 mmf \pm 10%; 500 vdcw. | Couples signal at S203 to control grid of V204. | CM20B101K | C207 |
| C207 | Same as C206. | Coupling capacitor between V204 and V205. | | |
| C208 | Capacitor, fixed: mica dielectric; 4700 mmf \pm 10%; 500 vdcw. | Blocking capacitor for J203. | CM35B472K | |
| C209 | Same as C102. (Capacitor, fixed: mica dielectric; 10,000 mmf \pm 10%; 300 vdcw.) | Charging capacitor for V207 during forward half-cycle and bypass capacitor for reverse half-cycle. | | |
| C210 | Same as C201. | With R229, forms a high-pass filter circuit. | | |
| C211 | Same as C203. | Filter capacitor in B+ supply. | | |
| C212 | Same as C203. | Filter capacitor in B+ supply. | | |
| C213 | Same as C112. (Capacitor, fixed: paper dielectric; 2 mf \pm 20% - 10%; 600 vdcw.) | Blocking capacitor; prevents current from rectifier CR301 from flowing through R232 or S206 and actuating relay K301. | | |

B-5. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER INDICATOR ID-353/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|------------------------------|--|-----------------------------|-----------------------------|
| C214 | Same as C209. | Bypasses to ground any high frequency components present in output of T202 which might disturb calibrator; stabilizes pulse frequency of calibrator on HIGH sensitivity range. | | |

ELECTRICAL EQUIPMENT

| | | | | |
|------|--|---|------------------------|--|
| E201 | Same as E107. (Holder, fuse: extractor post type for single 3AG fuse.) | Fuse holder for F201. | | |
| E202 | Same as E104. (Board, terminal: general purpose; 2 brass nickel pl screw term with solder tabs.) | 115 vac input terminals for use in bench tests. | | |
| E203 | Board, terminal: general purpose; 9 brass nickel pl screw term. | Terminal board for interconnecting cables. | Jones HB 9-141-B-2 | |
| E204 | Lamp, incandescent: switchboard; 145 v, 15 w; bulb T6 clear; candelabra screw base. | Illuminates record chart in M203. | Code 15T6, 145 volt | |
| E205 | Board, terminal: general purpose; 9 pairs solder lug term. | Mounting board for small components. | C-H FL3011 | |
| E206 | Board, terminal: general purpose; 14 pairs solder lug term. | Mounting board for small components. | C-H FL3012 | |

FUSES

| | | | | |
|------|---|---|--|--|
| F201 | Same as F101. (Fuse, cartridge: 1-1/4 amp, 250 v; one time; high time lag.) | Fuses ac power line input to indicator. | | |
|------|---|---|--|--|

HARDWARE PARTS

| | | | | |
|------|---|---|----------------------------|------|
| H201 | Same as H148. (Mounting, switch: steel, cad pl.) | Mounting for S207. | | |
| H202 | Same as H149. (Cover, switch: steel, cad pl; L-shaped.) | Protective cover for S207. | | |
| H203 | Same as H156. (Knob: bar; black bakelite; for 1/4" shaft.) | Knob for S202 and S203. (2 required) | | |
| H204 | Fastener: latch; cabinet; steel, cad pl. | Fastener for doors of cabinet A201. | ParMet Prod DL-Latch | |
| H205 | Handle: door; steel, chrom pl. | Handle for doors of cabinet A201. | ParMet Prod DL-DoorPull | |
| H206 | Screw, machine: slot drive; RH; steel, nickel pl; 1/4"-20 thd; 3/8" lg; all threaded. | Screw for mounting T202 to bracket A204. (6 required) | | H326 |
| H207 | Shaft lock: brass, nickel pl; 3/8"; locks 1/4" shafts. | Lock for potentiometers R209, R217, and R224 (as required). | Millen 10061 | |
| H208 | Same as H154. (Clamp: capacitor mtg; footed.) | Clamp for mtg C203. (2 required) | | |
| H209 | Same as H208. | Clamp for mtg C211. (2 required) | | |

B-5. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER INDICATOR ID-353/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|------------------------------|------------------|-----------------------------|-----------------------------|
|--------|------------------------------|------------------|-----------------------------|-----------------------------|

| | | | | |
|------|---------------|--|--|--|
| H210 | Same as H208. | Clamp for mounting C212. (2 required) | | |
|------|---------------|--|--|--|

JACKS AND CONNECTORS

| | | | | |
|------|---|----------------------------------|---------------|--|
| J201 | Connector, female contact: 4 round female contacts. | Connector at indicator for M203. | AN3102A-18-4S | |
|------|---|----------------------------------|---------------|--|

| | | | | |
|------|---|--|--|--|
| J202 | Same as J101. (Connector, male contact: 6 round male contacts.) | Connector at indicator for lines from terminal board E203. | | |
|------|---|--|--|--|

| | | | | |
|------|--|---|--|--|
| J203 | Same as J105. (Jack, telephone: for two cond 0.25" diam plug.) | Test jack for output of amplifier stages. | | |
|------|--|---|--|--|

| | | | | |
|------|---------------|-----------------------------|--|--|
| J204 | Same as J203. | Test jack for input signal. | | |
|------|---------------|-----------------------------|--|--|

INDUCTORS

| | | | | |
|------|--|----------------------------|--|--|
| L201 | Same as L101. (Reactor: filter choke; 12 hy, 105 ma; 150 ohms dc resistance; 2500 v RMS test; hermetically sealed metal case.) | Filter choke in B+ supply. | | |
|------|--|----------------------------|--|--|

| | | | | |
|------|---|--------------------------------|---------------|--|
| L202 | Reactor: filter choke; 0.8 hy, 350 ma; 19.5 ohm dc resistance; 2500 v RMS test; hermetically sealed metal case. | Blocks pulse signal from S205. | GE 7481579 | |
|------|---|--------------------------------|---------------|--|

METERS

| | | | | |
|------|---|---------------------------------|--|--|
| M201 | Same as M101. (Meter, arbitrary scale: transmission; dc; range 0 to 100; one ma full scale deflection; accuracy 1% of full scale deflection.) | Indicates transmission reading. | | |
|------|---|---------------------------------|--|--|

| | | | | |
|------|---|---|--|--|
| M202 | Same as M102. (Meter, frequency indicator: ac, 56 to 64 cycles; vibrating reed movement; hermetically sealed; scale calibrated in CALIBRATION SETTING of 84 to 96.) | Indicates calibration setting corresponding to ac line frequency. | | |
|------|---|---|--|--|

| | | | | |
|------|--|-------------------------------|-------------------------------|--|
| M203 | Meter, ammeter: dc; recording; 0 to 1 ma; metal flush mtg case; accuracy 1% of full scale reading; 1500 ohms resistance; self-contained chart drive, 7-day spring-wound motor. | Records transmission reading. | Esterline-Angus Model A.W. | |
|------|--|-------------------------------|-------------------------------|--|

CHARTS

| | | | | |
|------|---|------------------------|---|--|
| M201 | Chart: for recording transmission; time graduated in 15 min intervals with hours indicated by blue numerals, transmission axis graduated in 2% intervals to 100% with 10% intervals indicated by bold lines; suitable for 15 days record; 5 31/32" w x 103 ft lg. | Record chart for M203. | Gubelman Publishing Co. Chart 554313-C or Esterline-Angus Chart 4313-C | |
|------|---|------------------------|---|--|

| | | | | |
|------|---|---|----------------------------------|--|
| M202 | Scale, transmission conversion: recorder type; for 500-ft. baseline; has scales for DAY and NIGHT, LOW and HIGH sensitivity ranges; methyl methacrylate with bracket mtg. | Permits conversion of transmission reading to visual range at recorder. | (Not commercially manufactured.) | |
|------|---|---|----------------------------------|--|

| | | | | |
|------|--|---|----------------------------------|--|
| M203 | Scale, transmission conversion: desk type; for 500-ft baseline; has scales for DAY and NIGHT, LOW and HIGH sensitivity ranges and percent TRANSMISSION; methyl methacrylate. | Permits conversion of transmission reading to visual range at desk. | (Not commercially manufactured.) | |
|------|--|---|----------------------------------|--|

B-5. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER INDICATOR ID-353/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|------------------|--|--|------------------------------|-----------------------------|
| <u>PLUGS</u> | | | | |
| P201 | Connector, male contact: 4 round male contacts; with cable clamp. | Plug for J201 (on cable W201). | AN3106A-18-5P w/AN3057-10 | |
| P202 | Same as P103. (Connector, female contact; 6 round female contacts; with cable clamp.) | Plug for J202 (on cable W204). | | |
| P203 | Connector, male contact: 2 rectangular parallel contacts; straight; 15 amp, 115 v; part of W205. | Plugs into ac power source. | Hubbell 7057 | |
| <u>RESISTORS</u> | | | | |
| R201 | Resistor, fixed: composition; 18 meg \pm 10%; 1/2 w. | Grid resistor for V201. | RC20BF186K | |
| R202 | Resistor, fixed: composition; 2.2 meg \pm 10%; 1/2 w. | Stopping resistor for V201; reduces grid current during periods of conduction of the tube. | RC20BF225K | R230 |
| R203 | Resistor, fixed: composition; 270,000 ohm \pm 10%; 1/2 w. | Quenches discharge through V201. | RC20BF274K | |
| R204 | Same as R112. (Resistor, fixed: composition; 100,000 ohm \pm 10%; 1/2 w.) | Limits suppressor grid current in V201 during discharge; develops feed-back signal. | | |
| R205 | Resistor, variable: composition; 100,000 ohm \pm 10%; 2 w; slotted, round metal shaft; linear taper. | With R205A makes sensitivity of indicator on HIGH sensitivity range five times as sensitive as on LOW sensitivity range. | AB JLU1041 | |
| R205A | Resistor, fixed: wirewound; precision; 550,000 ohms \pm 1%; 1/2 w. | With R205 makes sensitivity of indicator on HIGH sensitivity range five times as sensitive as on LOW sensitivity range. | RB13B55002F | |
| R206 | Resistor, fixed: wirewound; precision; 150,000 ohms \pm 1%; 1/2 w. | LOW range sensitivity resistor. | RB13B15002F | |
| R207 | Same as R117. (Resistor, variable: composition; 1000 ohm \pm 10%; 2 w; slotted round metal shaft; linear taper.) | Grid bias adjustment potentiometer for V201. | | |
| R208 | Resistor, fixed: wirewound; 100 ohm \pm 5%; 1 w. | Determines minimum grid bias of V201. | RU48101J | R210 |
| R209 | Resistor, variable: wirewound; 50 ohm \pm 10%; 2 w; taper A; slotted round shaft. | Permits adjustment of electrical zero of the bridge circuit by varying the "no-signal" voltage on grid of V202. | RA20A1SD500AK | |
| R210 | Same as R208. | Limits range of zero adjustment (R209). | | |

B-5. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER INDICATOR ID-353/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|---|--|-----------------------------|-----------------------------|
| R211 | Resistor, fixed: composition; 4.7 meg \pm 10%; 1/2 w. | With C204, forms an RC circuit which smooths the voltage applied to grid of V202. | RC20BF475K | |
| R212 | Resistor, fixed: composition; 3000 ohm \pm 10%; 1/2 w. | Introduces degeneration in V202 to improve linearity. | RC20BF302K | |
| R213 | Resistor, fixed: wirewound; precision; 200,000 ohm \pm 1%; 1/2 w. | Fixed arm in the bridge; plate load of V202. | RB13B20002F | |
| R214 | Resistor, fixed: wirewound; 10,000 ohm \pm 5%; 30 w. | Fixed arm in the bridge; plate load of V203. | RW34F103 | |
| R215 | Resistor, fixed: composition; 1500 ohm \pm 5%; 1 w. | Substitutes for resistance of M203. | RC30BF152J | |
| R216 | Resistor, fixed: wirewound; pre- cision; 50,000 ohms \pm 1%; 1/2 w. | With R217 and R218, forms B+ potential divider. | RB13B50001F | R218 |
| R217 | Resistor, variable: composition; 50,000 ohm \pm 10%; 2 w; slotted, round metal shaft; linear taper. | With R216 and R218, forms B+ potential divider; ad- justs calibration by vary- ing B+ to plate of V201. | AB JLU5031 | R224 |
| R218 | Same as R216. | With R216 and R217, forms B+ potential divider. | | |
| R219 | Not used. | | | |
| R220 | Resistor, fixed: composition; 100,000 ohm \pm 10%; 1 w. | Plate load resistor for V204. | RC30BF104K | |
| R221 | Resistor, fixed: composition; 470,000 ohm \pm 10%; 1/2 w. | Dropping resistor for po- tential on screen grid of V204. | RC20BF474K | |
| R222 | Same as R101. (Resistor, fixed: composition; 1 meg \pm 10%; 1/2 w.) | Grid resistor for V204. | | |
| R223 | Same as R105. (Resistor, fixed: composition; 10,000 ohm \pm 10%; 1 w.) | Cathode bias resistor for V204. | | |
| R224 | Same as R217. | Plate load resistor for V205; adjusts signal strength to grid of V201. | | |
| R225 | Same as R222. | Grid resistor for V205. | | |
| R226 | Resistor, fixed: composition; 470 ohm \pm 10%; 1/2 w. | Cathode bias resistor for V205. | RC20BF471K | |
| R227 | Resistor, variable: composition; 5 meg \pm 20%; 2 w; slotted, round metal shaft; linear taper. | With R230, adjusts frequen- cy of the HIGH sensitivity range calibration signal to one-fifth of LOW sensitivity range calibration frequency. | AB JLU5052 | |
| R228 | Same as R110. (Resistor, fixed: composition; 47,000 ohm \pm 10%; 1/2 w.) | Limits current through V207 when R227 and R230 are shorted. | | |
| R229 | Same as R228. | With C210, forms a high- pass filter circuit. | | |

B-5. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER INDICATOR ID-353/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|-----------------|---|---|----------------------------------|-----------------------------|
| R230 | Same as R202. | With R227, adjusts frequency of the HIGH sensitivity range calibration signal to one-fifth of LOW sensitivity range calibration frequency. | | |
| R231 | Resistor, fixed; wirewound; 3500 ohm \pm 5%; 12 w. | Ballast resistor for V209 and V210. | RW32F352 or RW32G352 | |
| R232 | Resistor, fixed; wirewound; 500 ohm \pm 5%; 10 w. | Loads transmission line to reduce effects of line noise. | RW31F501 | |
| <u>SWITCHES</u> | | | | |
| S201 | Same as S103. (Switch, toggle: SPDT.) | Switches recording meter M203 in or out of circuit. | | |
| S202 | Switch, rotary; position #1 -- 3A; position #2--3A; 3 amp, 110 vac. | Selects range of sensitivity for operation; actuates marker pen on M203 to indicate range of operation; determines frequency of calibrator. | Mossman DP 4402TL-NT- 3PDT | |
| S203 | Same as S104. (Switch, rotary: position #1--1C, position #2--1A; 3 amp, 110 vac; momentary contact in position #2.) | Energizes calibrator and replaces pulse-amplifier signal on grid of V204 with calibrator signal. | | |
| S204 | Same as S102. (Switch, toggle: DPST.) | Main ac power switch. | | |
| S205 | Switch, toggle: SPST; normally off, momentarily on. | Actuates power relay K301 at projector power supply. | ST12C | S206 |
| S206 | Same as S205. | Shorts input signal to amplifier for check on electrical zero of bridge circuit. | | |
| S207 | Not used. | | | |

TRANSFORMERS

| | | | | |
|------|---|--|-------------------|------|
| T201 | Same as T103. (Transformer, power: filament and plate type; input 117 v, 50/60 cyc, single ph; sec #1, 740 vCT at 150 ma, sec #2, 5 vCT at 3 amp, sec #3, 6.3 vCT at 4 amp, sec #4, 6.3 vCT at 1 amp; hermetically sealed metal case.) | Supplies ac power to filaments and B+ rectifier. | | |
| T202 | Transformer, power regulating: fixed; input 95-125 volts, 57-63 cyc, single phase, 0.120 kva; output 115 v, 1.04 amp; regulation \pm 1-1/2% on 57-63 cyc; 1500 v insulation test voltage; vacuum varnish impregnated; enclosed, steel case; compensated for variable input frequency. | Regulates voltage of input ac power. | Sola Elec 6088 | T301 |

B-5. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER INDICATOR ID-353/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|---------------------|--|--|-----------------------------|-----------------------------|
| <u>VACUUM TUBES</u> | | | | |
| V201 | Same as V108. (Tube, electron: JAN-2050; thyratron.) | Electronic switch; discharges C202 once for each pulse, producing a current whose average value is proportional to the pulse rate. | | |
| V202 | Tube, electron: JAN-6J5; triode. | Produces a current through V201 proportional to the voltage developed in the cathode circuit of V201. | JAN-6J5 | V205 |
| V203 | Same as V104. (Tube, electron: JAN-OC3; diode voltage regulator.) | Permits elimination of the "no-signal" current through M201; regulates voltage across V202. | | |
| V204 | Tube, electron: JAN-6SJ7; pentode. | First-stage pulse signal amplifier. | JAN-6SJ7 | |
| V205 | Same as V202. | Second-stage pulse signal amplifier. | | |
| V206 | Same as V106. (Tube, electron: JAN-6H6; duo-diode rectifier.) | Half-wave rectifier for calibrator. | | |
| V207 | Same as V107. (Lamp, glow: 115 v, 1/4 w; bulb T-4 1/2 clear; double contact bayonet base.) | Generates calibration pulses. | | |
| V208 | Same as V103. (Tube, electron: JAN-5Y3GT; duo-diode rectifier.) | B+ rectifier. | | |
| V209 | Same as V105. (Tube, electron: JAN-OD3; diode voltage regulator.) | With V210, regulates B+ for V201, V202, and V203. | | |
| V210 | Same as V209. | With V209, regulates B+ for V201, V202, and V203. | | |

WIRES AND INTERCONNECTING CABLES

| | | | | |
|------|---|-----------------------------------|---------------|--|
| W201 | Cable assembly, special purpose: 4 #16 AWG stranded copper cond; 600 v working; type S0 neoprene jacket; 43" lg excluding terminations; AN3106A-18-5P connector with AN3057-10 cable clamp on one end, other end terminated with solder lugs. | Cable between indicator and M203. | C-H FL2941 | |
| W202 | Cable assembly, power: type S0 cable; 2 #16 AWG stranded copper cond; 600 v working; 44" lg excluding terminations; solder lugs on one end, other end stripped 1/2". | Cable between E203 and E204. | C-H FL3064 | |
| W203 | Not used. | | | |

B-5. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER INDICATOR ID-353/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|--|--|-----------------------------|-----------------------------|
| W204 | Cable assembly, special purpose: 6 #16 AWG stranded copper cond; 600 v working; type S0 neoprene jacket; 50" lg excluding terminations; AN3106A-22-5S connector with AN3057-12 cable clamp on one end, solder lugs on other end. | Cable between indicator and terminal block E203. | C-H FL2942 | |
| W205 | Cable assembly, power: 2 #16 AWG stranded copper cond; type S0 cable; 600 v working; 10 ft. lg excluding terminations; Hubbell connector #7057 on one end, solder lugs on other end. | Cable from power source to E203. | C-H FL4367 | |

SOCKETS

| | | |
|------|---|------------------|
| X201 | Same as X103. (Socket, tube: octal.) | Socket for V201. |
| X202 | Same as X201. | Socket for V202. |
| X203 | Same as X201. | Socket for V203. |
| X204 | Same as X201. | Socket for V204. |
| X205 | Same as X201. | Socket for V205. |
| X206 | Same as X201. | Socket for V206. |
| X207 | Same as X107. (Socket, tube: neon lamp; double contact candleabra bayonet; brass nickel pl body; 105-125 v, 1/4 w.) | Socket for V207. |
| X208 | Same as X201. | Socket for V208. |
| X209 | Same as X201. | Socket for V209. |
| X210 | Same as X201. | Socket for V210. |

B-6. IDENTIFICATION OF PARTS FOR RECORDER.

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|---|---|---|-----------------------------|
| M203A | Pen, recorder: glass capillary-tubing point; capillary tube brass, nickel pl; indicator target above pen point; part of meter M203. | Records reading of meter M203. | Esterline-Angus 8510 | |
| M203B | Pen, marker: glass capillary-tubing point; brass, chromium pl; part of meter M203. | Records indication of sensitivity range of indicator. | Esterline-Angus 9892 | |
| M203C | Accessory kit, recorder: consists of one 2-ounce bottle red recording ink, one ink reservoir filler, one pen filler, one glass pen tip. | Inking kit for meter M203. | Esterline-Angus "AW" Accessory Kit Code ZEMHO | |

B-6. IDENTIFICATION OF PARTS FOR RECORDER. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|--|-----------------------------------|-----------------------------|-----------------------------|
| M203D | Pen tip, recorder: glass capillary-tubing point; part of meter M203. | Replacement tip for recorder pen. | Esterline-Angus 82C | |
| M203E | Reservoir, ink: brass, tin pl; part of meter M203. | Holds ink for recorder pen. | Esterline-Angus 8516 | |

B-7. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER PROJECTOR ML-461/GMQ-10 AND POWER SUPPLY PP-908/GMQ-10.

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|-------------------------|--|--|-----------------------------|-----------------------------|
| <u>STRUCTURAL PARTS</u> | | | | |
| A301 | Housing: lamp; cast aluminum, anodized. | Holds projector lamp. | C-H FL3144 | |
| A302 | Hood: lamp; sheet aluminum, anodized. | Stray light shield; protects lamp E301. | C-H FL3317 | |
| A303 | Cover: rear; cast aluminum, anodized. | Cover for A301. | C-H FL3145 | |
| A304 | Plate, base: brass. | Mounting base for projector. | C-H FL3296 | |
| A305 | Table, mounting: brass. | Mounting table for projector. | C-H FL3295 | |
| A306 | Ring, retainer: steel, cad pl. | Holds projector lamp E301 in position. | C-H FL3644 | |
| A307 | Cabinet: projector power supply; cast aluminum. | Cabinet for projector power supply unit. | C-H FL3609 | |
| A308 | Bracket, mounting: for transformer. | Mounting bracket for transformer T301. | C-H FL3606 | |
| A309 | Same as A113. (Mounting sub-assembly: front; aluminum.) | Front mounting base for cabinet A307. | | |
| A310 | Same as A114. (Mounting sub-assembly: rear; aluminum.) | Rear mounting base for cabinet A307. | | |
| A311 | Same as A116. (Terminal box with cover: gray cast iron.) | Waterproof housing for terminal blocks E205 and E306 and circuit breaker K302. | | |
| A312 | Same as A117. (Hub plate, conduit: blank; gray cast iron.) | Hub plate for A311. | | |
| A313 | Same as A118. (Hub plate, conduit: one 2 1/2" threaded conduit hub; gray cast iron.) | Hub plate for A311. | | |
| A314 | Same as A119. (Hub plate, conduit: one 1" threaded conduit hub; gray cast iron.) | Hub plate for A311. | | |
| A315 | Same as A120. (Plate, mounting: sheet steel.) | Mounting plate in A311 for terminal blocks and circuit breaker. | | |

B-7. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER PROJECTOR ML-461/GMQ-10
AND POWER SUPPLY PP-908/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|-----------------------------|---|--|------------------------------------|-----------------------------|
| <u>MOTORS</u> | | | | |
| E301 | Motor, ac: synchronous type; 20 ounce-inches torque at 1/60 rpm; 115 v, 60 cyc, single phase, 2.5 w; sealed-in lubrication; high starting torque. | Opens S302A hourly. | Hayden 1600A | |
| <u>CAPACITORS</u> | | | | |
| C301 | Same as C205. (Capacitor, fixed: mica dielectric; 1000 mmf \pm 10%; 500 vdcw.) | Blocking capacitor for J301. | | |
| <u>RECTIFIERS</u> | | | | |
| CR301 | Rectifier, metallic: input 26 vac, 60 cyc; output 19 vdc, 225 ma. | Supplies dc power to operate K301. | Fed Tel & Rad 102B1EX1 | |
| <u>ELECTRICAL EQUIPMENT</u> | | | | |
| E301 | Lamp, incandescent: 6 v, 120 w; bulb PAR-64 clear; C-6 filament; burn filament vertical. | Projector lamp. | GE 120 PAR Transmis- someter | |
| E302 | Same as E107. (Holder, fuse: extractor post type for single 3AG fuse.) | Fuse holder for F301. | | |
| E303 | Board, terminal: general purpose; 12 brass nickel pl screw term. | Terminal board for interconnecting cables. | Jones HB 12-141-B-2 | |
| E304 | Same as E102. (Insulator, stand-off: conical shape; white porcelain glazed.) | Insulator for mounting C301. | | |
| E305 | Same as E109. (Board, terminal: general purpose; 8 brass screw term.) | Terminal board for field cabling. | | |
| E306 | Same as E110. (Board, terminal: general purpose; 4 brass screw term.) | Terminal board for field power cable. | | |
| <u>FUSES</u> | | | | |
| F301 | Fuse, cartridge: 2 amp, 250 v; one time; high time lag. | Fuses ac power line input to projector power supply. | Buss MDL-2 | |
| <u>HARDWARE PARTS</u> | | | | |
| H301 | Pin, hinge: aluminum; 1/4" diam x 6 5/32" lg; drilled with 3/32" diam hole 3/32" from each end. | Hinge pin for cover A303. | C-H FL3302 | |
| H302 | Screw, machine: hex head; slot drive; captive; brass, nickel pl; 5/16"-18 thd; 1-1/8" lg; necked portion 7/32" diam; 3/8" threaded portion. | Holds cover on housing A301. (4 required) | C-H FL3303 | |

B-7. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER PROJECTOR ML-461/GMQ-10
AND POWER SUPPLY PP-908/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|--|---|-----------------------------|-----------------------------|
| H303 | Screw, machine: hex head; brass, nickel pl; 1/2"-13 thd; 1-3/4" lg; threaded portion 1-1/4" lg. | Mounting screw to hold housing A301 in yoke of base plate A304. (2 required) | | |
| H304 | Screw, machine: slot drive; RH; steel, cad pl; #8-32 thd; 3/8" lg; all threaded. | Mounts hood A302 to housing A301. (9 required) | | |
| H305 | Gasket: lamp; fiber. | Gasket between lamp E301 and housing A301. | C-H FL3308 | |
| H306 | Screw, machine: slot drive; Fil H; brass, nickel pl; #10-24 thd; 3/8" lg; all threaded. | Mounts retaining ring A306 in housing A301. (3 required) | | |
| H307 | Washer, flat: fiber; round, 11/64" ID, 25/64" OD, 0.02" thk. | Makes H306 captive. (3 required) | | |
| H308 | Fitting, conduit: flexible cable to conduit; aluminum; 3/4" male thd. | Watertight entrance fitting. | C-H CGY2352 | H333 |
| H309 | Bushing: reducer; rubber. | Bushing for fitting H308. | C-H Bush113D | H334 |
| H310 | Fitting, conduit: reducer; steel, cad pl; 1" to 3/4". | Reduces size of threaded hole. | C-H RE32 | H335 |
| H311 | Gasket: cover; silicone-treated asbestos; round. | Gasket for cover A303. | C-H FLA306 | |
| H312 | Screw, machine: slot drive; hex head; bronze, nickel pl; 3/8"-24 thd; 2" lg; all threaded; oval point. | Horizontal alignment adjustment screw. (2 required) | C-H FL3301 | |
| H313 | Nut, hexagon: bronze, nickel pl; 3/8"-24 thd; 3/8" thk; 11/16" wd across flats. | Locking nut for horizontal adjustment screws. (4 required) | C-H FL1847 | H315 |
| H314 | Screw, machine: hex head; bronze, nickel pl; 3/8"-24 thd; 2-3/4" lg; all threaded; oval point. | Vertical alignment adjustment screw. (2 required) | C-H FL3300 | |
| H315 | Same as H313. | Locking nut for vertical adjustment screw. (4 required) | | |
| H316 | Nut, hexagon: brass, nickel pl; 1/2"-13 thd; 1/2" thk; 5/8" wd across flats. | Nut for studs on mounting table A305. (4 required) | | |
| H317 | Nut, hexagon: bronze, nickel pl; 5/8"-11 thd; 5/8" thk; 1" wd across flats. | Nut for center stud on mounting table A305. | | |
| H318 | Same as H126. (Lock: key latch; ward mechanism.) | Latch for cabinet A307. | | |
| H319 | Same as H127. (Key, lock: brass.) | Key for H318. | | |
| H320 | Screw, machine: slot drive: RH; steel, nickel pl; 3/8"-16 thd; 1" lg; all threaded. | Fastens mounting brackets A308 inside cabinet A307. (4 required) | | |

B-7. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER PROJECTOR ML-461/GMQ-10
AND POWER SUPPLY PP-908/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|---|---|-----------------------------|-----------------------------|
| H321 | Nut, hexagon: steel, nickel pl; 3/8"-16 thd; 5/16" thk; 5/8" wd across flats. | Nut for screws H320. (4 required) | | |
| H322 | Same as H125. (Gasket: door; silicone-treated asbestos.) | Gasket for door of cabinet A307. | | |
| H323 | Same as H153. (Screw, machine: slot drive; hex head; steel, nickel pl; 3/8"-16 thd; 3/4" lg; all threaded.) | Screw for mounting sub- assemblies A309 and A310 to cabinet A307. (6 required) | | |
| H324 | Same as H146. (Strike, lock: steel; L-shaped.) | Strike for latch H318. | | |
| H325 | Not used. | | | |
| H326 | Same as H206. (Screw, machine: slot drive; RH; steel, nickel pl; 1/4"-20 thd; 3/8" lg; all threaded.) | Screw for mounting volt- age-regulating trans- former T301 to bracket A308. (6 required) | | |
| H327 | Same as H152. (Nut, hexagon: brass, cad pl; 1/2"-13 thd; 1/2" thk; 5/8" wd across flats.) | Nut for studs on mount- ings A309 and A310. (4 required) | | |
| H328 | Same as H128. (Bolt, double end- ed: stainless steel; 1/4"-20 thd; 2-3/4" lg; 3/8" threaded length each end; less nuts.) | Hinge bolt for door of cabinet A307. (2 required) | | |
| H329 | Same as H129. (Nut, hexagon: steel, chromium pl, 1/4"-20 thd; 1/4" thk; 7/16" wd across flats.) | Nut for H328. (4 required) | | |
| H330 | Screw, machine: slot drive; RH; steel, nickel pl; 5/16"-18 thd; 3/4" lg; all threaded. | Screw for mounting pro- jector power supply unit in cabinet A307. (3 required) | | |
| H331 | Nut, hexagon: steel, nickel pl; 5/16"-18 thd; 5/32" thk; 9/16" wd across flats. | Nut for H330. (3 required) | | |
| H332 | Same as H156. (Knob: bar; black bakelite; for 1/4" shaft.) | Knob for S303. | | |
| H333 | Same as H308. | Watertight entrance fitting. | | |
| H334 | Same as H309. | Rubber bushing for H333. | | |
| H335 | Same as H310. | Reduces size of thread- ed hole. | | |
| H336 | Same as H136. (Fitting, conduit: flexible cable to conduit; brass; 1" male thd.) | Watertight entrance fitting. (2 required) | | |
| H337 | Same as H137. (Bushing: reducer; rubber.) | Bushing for H336. (2 required) | | |
| H338 | Same as H138. (Washer, gland: steel, cad pl; 1" ID, 1 3/8" OD, 0.025" thk.) | Permits tightening of H336 without distorting H337. (2 required) | | |

B-7. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER PROJECTOR ML-461/GMQ-10
AND POWER SUPPLY PP-908/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|---|--|-----------------------------|-----------------------------|
| H339 | Same as H161. (Nut, check; hexagon; steel, cad pl; 1", pipe thd.) | Locks fitting H336 in place. (2 required) | | |
| H340 | Same as H164. (Gasket: cover; rubber; 3/8" diam, 46" lg.) | Gasket for cover of terminal box A311. | | |
| H341 | Same as H165. (Gasket: hub; cork.) | Gasket between hub plates and terminal box A311. (3 required) | | |

JACKS AND CONNECTORS

| | | | | |
|------|---|----------------------------------|--|--|
| J301 | Same as J105. (Jack, telephone: for two cond 0.25" diam plugs.) | Signal line test jack. | | |
| J302 | Same as J104. (Connector, female contact: 2 curved contacts; accepts standard 2-rectangular contact male plug.) | Convenience outlet for ac power. | | |

RELAYS AND CIRCUIT BREAKERS

| | | | | |
|------|--|--|-------------------------|--|
| K301 | Relay, armature: contact arrangement 1B; contact rating 1.5 amp at 115 v, 60 cyc inductive load; single wound coil, 6 vdc, 7.5 ma; 300 ohm dc resistance; octal socket base; hermetically sealed metal envelope. | Breaks ac power to voltage-regulating transformer T301 for back-ground check (actuated by S205). | WL Model 108-Special | |
| K302 | Same as K101. (Circuit breaker: magnetic; 2 pole; 125 vac, 5 amp; molded black bakelite case; toggle action, manual reset.) | Circuit breaker for input power. | | |

METERS

| | | | | |
|------|--|---|--|--|
| M301 | Same as M101. (Meter, arbitrary scale: transmission; dc; range 0 to 100; one ma full scale deflection; accuracy 1% of full scale deflection. | Indicates transmission reading (in series with M101). | | |
|------|--|---|--|--|

SWITCHES

| | | | | |
|------|--|-----------------------------|--|--|
| S301 | Same as S102. (Switch, toggle: DPST.) | Main ac power switch. | | |
| S302 | Switch subassembly: for adjustable periodic lamp cutoff; consists of synchronous motor (B301) and SPST normally off sensitive switch (S302A); motor 115 v, 60 cyc, 1/60 rpm. | Consists of B302 and S302A. | Hayden Series 5800 Repeat Interval Timer | |

B-7. IDENTIFICATION OF PARTS FOR TRANSMISSOMETER PROJECTOR ML-461/GMQ-10
AND POWER SUPPLY PP-908/GMQ-10. (cont.)

| Symbol | Name of Part and Description | Function of Part | Type Number (JAN or Mfr) | Other Identical Parts |
|--------|--|---|-----------------------------|-----------------------------|
| S302A | Switch, sensitive: SPST; 125 v, 10 amp; momentary action, normally closed. | Breaks ac power to voltage-regulating transformer T301. | Micro Sw BZ-2RW13 | |
| S303 | Switch, rotary: 1 pole, 5 position; 10 amp, 150 v; silver alloy cont; ceramic body; solder lng term. | Selects operating voltage for lamp E301. | Ohmite 111-5 | |

TRANSFORMERS

| | | | | |
|------|--|---|------------------------|--|
| T301 | Same as T202. (Transformer, power regulating: fixed; input 95-125 volts, 57-63 cyc, single phase, 0.120 kva; output 115 v, 1.04 amp; regulation $\pm 1/2\%$ on 57-63 cyc; 1500 v insulation test voltage; vacuum varnish impregnated; enclosed, steel case; compensated for variable input frequency.) | Supplies regulated ac voltage to T303. | | |
| T302 | Transformer, power: filament; 115 v, 60 cyc, single ph; 1 outpnt winding; sec 20 v, 0.05 amp; 2500 v insulation; hermetically sealed metal case. | Supplies ac power to CR301. | GE 7481529 | |
| T303 | Transformer, power: filament; 115 v, 60 cyc, single ph; 1 input winding, tapped to give outputs of 4.8, 5.4, 6.0, 6.6, and 7.2 v at 25 amp; 1750 v insulation; hermetically sealed metal case. | Reduces output voltage of T301 to the operating voltage of lamp E301. | Raytheon 292-1602G1 | |

WIRES AND INTERCONNECTING CABLES

| | | | | |
|------|---|----------------------------|---------------|--|
| W301 | Cable assembly, power: type SE, style U; 2 #6 AWG stranded copper cond, with #6 AWG stranded copper concentric sheath; type RH rubber insulation; 600 v working; 10 ft lg excluding terminations; solder lugs on both ends. | Connects ac power to E301. | C-H FL4122 | |
|------|---|----------------------------|---------------|--|

SOCKETS

| | | | | |
|------|--------------------------------------|------------------|--|--|
| X301 | Same as X103. (Socket, tube: octal.) | Socket for K301. | | |
|------|--------------------------------------|------------------|--|--|

THE NATIONAL BUREAU OF STANDARDS

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The functions of the National Bureau of Standards are set forth in the Act of Congress, March 3, 1901, as amended by Congress in Public Law 619, 1950. These include the development and maintenance of the national standards of measurement and the provision of means and methods for making measurements consistent with these standards; the determination of physical constants and properties of materials; the development of methods and instruments for testing materials, devices, and structures; advisory services to Government Agencies on scientific and technical problems; invention and development of devices to serve special needs of the Government; and the development of standard practices, codes, and specifications. The work includes basic and applied research, development, engineering, instrumentation, testing, evaluation, calibration services, and various consultation and information services. A major portion of the Bureau's work is performed for other Government Agencies, particularly the Department of Defense and the Atomic Energy Commission. The scope of activities is suggested by the listing of divisions and sections on the inside of the front cover.

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